

Unit 2

Waves

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1 Wave Vocabulary

- Wave Types
 - mechanical waves
 - electromagnetic waves
- Wave Properties
 - amplitude
 - wavelength
 - frequency

mechanical waves

- ① require a medium, or material(i.e. gas, liquid, solid), for transmission
- ② energy comes from a vibrating source
- ③ the wave passes through a medium, but the medium itself does not travel along with the wave as energy is transmitted.

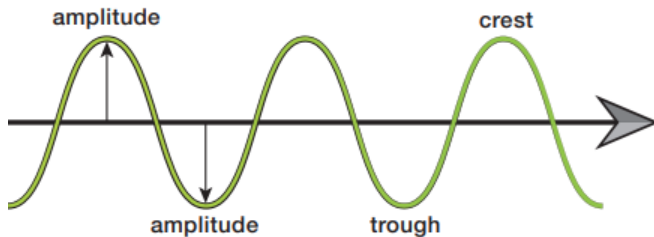
electromagnetic waves

- ① do not need a medium
- ② include visible light as well as infrared and ultraviolet light, microwaves, X-rays, and gamma rays.
- ③ These waves are generated by oscillations of electrical and magnetic fields from charged particles
- ④ All electromagnetic waves in a vacuum move at the same speed. This speed, 3×10^8 m/s, is known as the speed of light and is represented by the letter c .

amplitude

amplitude

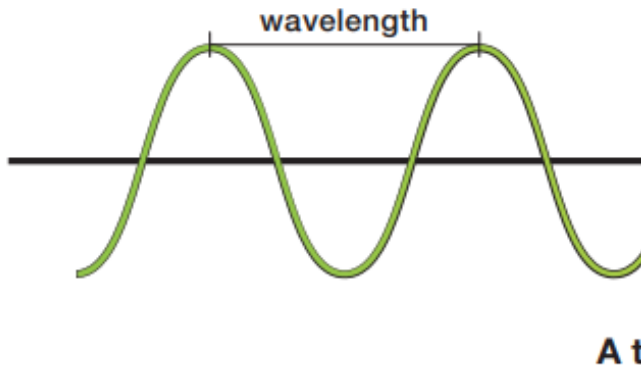
The distance from a midline to a crest or trough



wavelength

wavelength

The distance from one crest or trough to the next



wavelength

wavelength

The number of wavelengths that pass a point in a given amount of time (usually one second) is the wave's frequency(f)

